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**REMARKS**

Claims 12-18 remain pending in this application. Claim 1, 2 and 4-20 are rejected. Claim 3 is previously cancelled. Claims 1, 2, 4-9 and 20 are cancelled herein. Claim 10 is considered previously cancelled since it was omitted in new claim listings of an Amendment submitted September 29, 2005, and has been since been omitted and not objected to by the Examiner. Hence, it is apparent that the claim is being treated as cancelled by the Patent Office. Claim 12 is amended to incorporate language from claim 1 relating to cutting to form a collector having a predetermined width from the cut to the substantially true straight boundary.

**CLAIM REJECTIONS UNDER 35 U.S.C. §§ 102(b) and 103(a)**

Claims 1, 2 4-9, 11-18 and 20 are rejected under 35 U.S.C. § 102(b) as being anticipated by either the Hideo or Mikiaki references or in the alternative under 35 U.S.C. § 103(a) as being rendered obvious by either the Hideo or Mikiaki references. Claims 3 and 19 are rejected under 35 U.S.C. § 103(a) as being rendered obvious by either the Hideo or Mikiaki references. Applicants herein respectfully again traverse these rejections as they apply to remaining claims 12-18.

The Examiner's rejections set forth are the same as those of the previous Office Action. Hence applicants reiterate and incorporate herein the arguments

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previously submitted as the arguments are still deemed valid. It appears from the Examiner's Response to Arguments that the thrust of these arguments has not been fully appreciated by the Examiner. Therefore, applicant addresses below the Response to Arguments presented by the Examiner after a brief review of the invention presented in the claims.

"Under 35 U.S.C. §102, anticipation requires that each and every element of the claimed invention be disclosed in the prior art reference. ... In addition, the prior art reference must be enabling, thus placing the allegedly disclosed matter in the possession of the public." *Akzo N.V. v. U.S. International Trade Commission*, 1 USPQ 2d 1241, 1245 (Fed. Cir. 1986), *cert. denied*, 482 U.S. 909 (1987). This premise is further enforced for obviousness rejections. Independent claim 12 recites the process steps of the method claims of the parent application which have now issued in U.S. Patent number 6,878,173. To the extent these process limitations produce structure distinctions in the *product* over the prior art, the distinctions must be given as much consideration as traditional product characteristics.

The Examiner again states in the Response to Arguments that the product itself of a product-by-process claimed must have structure distinguishing over the prior art. Applicant does not deny this but has set forth extensive arguments in the Supplemental Amendment and Rule 132 Declaration filed September 11, 2006,

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establishing that the claimed process steps produce a product structurally different from the products of either the Hideo or Mikiaki references.

#### A. SUBSTANTIALLY TRUE STRAIGHT BOUNDARIES.

From the Response to Arguments it is readily apparent that the Examiner is not properly considering the claimed limitations that "substantially true straight boundaries exhibit a deviation from straight of no more than 0.2 mm." The Examiner appears to be misreading the claim language as reciting the straight boundaries themselves as being later cut and somehow removed from the final battery and therefore forming only an intermediate product. The Examiner states that the "limitation with respect to the intermediate of a claim cannot be given weight when the claim is to an end product." While such statement can be true with respect to intermediates in certain circumstances, the law with regard to intermediates is totally inapplicable to the presently claimed invention with respect to the true straight boundaries claimed as these boundaries exist in the finished product.

Claim 12 recites the following language incorporated from claim 1 and clarified:

cutting said core substrate exposed section along a straight line displaced from said substantially true straight boundaries by a predetermined width after said compressing to form said battery electrode plate with a current collector having a straight edge

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formed by the cutting of said core substrate exposed section and said predetermined width defined by said straight edge and an opposing one of said substantially true straight boundaries.

As is readily evident from the above language, the cutting is done to the core substrate exposed section to form a current collector that has "said predetermined width defined by said straight edge and an opposing one of said substantially true straight boundaries." The cut is claimed displaced from said substantially true straight boundaries so that the collector has a *predetermined width* defined by the *straight edge* created by the cut and the *substantially true straight boundary*. Hence, the *substantially true straight boundary* remains in the product after the cut because it is spaced the predetermined width from the cut so as to form a collector of the predetermined width. There is nothing in the claim supporting an interpretation that the *substantially true straight boundary* does not remain in the battery product. Therefore, the boundary as claimed is structure which must be given patentable consideration as comprising structure in the product produced by the process limitations of the claim.

B. 4% OR LESS RESIDUAL ACTIVE MATERIAL BY WEIGHT IN SAID VOLUME OF SAID CORE SUBSTRATE EXPOSED SECTION.

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In the Response to Arguments the Examiner asserts that the process of removing the residue yields an intermediate. This is not correct. The current collector is formed with the claimed residue level and remains in the finished product. The current collector with the claimed low residue level facilitates welding of a current collecting lead.

The Examiner further questions the average amount discussed in the Rule 132 Declaration. The claim 12 recites that the residue level is 4% or less. The claim does not recite a decimal value such as 4.0%. The *average* test result is 4.29%. This rounds clearly to the 4% claimed. Furthermore, the test results range from 3.97 to 4.6%. From this is evident that the claimed invention can achieve a residue level down to 3.97% which, even given the Examiner's unduly restrictive interpretation of the claim language, provide support for the invention achieving the Examiner's interpretation. It well established that an invention need only function to achieve the claimed result which the test data demonstrates. There is no requirement that the invention achieve such results 100% of the time.

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C. SAID CORE SUBSTRATE EXPOSED SECTION, AFTER SAID REMOVING OF SAID ACTIVE MATERIAL AND SAID COMPRESSING, BEING SUBSTANTIALLY EQUAL TO A STRENGTH OF SAID PRESSED PORTIONS.

The Examiner further again states that the Hideo reference relates that "no residue" is left and that one would realize that brushing done for a longer period would remove all residue. Applicant submits that the "no residue" result in combination with "brushing for a longer period" is merely based on the Examiner's speculation and lacks appreciation of the actual manufacturing constraints of the technology involved.

Claim 12 requires that "said core substrate exposed section, after said removing of said active material and said compressing, being substantially equal to a strength of said pressed portions." It is respectfully submitted that the "no residue" statement is merely an optimistic goal and that one skilled in the art would readily appreciate that brushing to achieve this goal would result in detrimental weakening of the exposed substrate portion which forms the collector. Given this weakening a reliable weld to the portion would not be achievable with any certainty since the portion welded to is weakened. In this regard the Examiner is reminded that the prior art must be enabling. It is submitted that the Hideo art is

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not enabling for the combination of the claimed residue level and strength limitations.

The Examiner's attention is directed claims 12-18 which require both that the residue level be 4% or less and that "a strength of said core substrate exposed section, after said removing of said active material and said compressing, being substantially equal to a strength of said pressed portions." It is submitted that the "longer brushing" proposed by the Examiner would make it impossible to achieve the claimed strength set forth for the core substrate exposed section.

Furthermore the Mikiaki reference, which uses blowing, has been shown by the test results in the Rule 132 Declaration as failing to achieve the claimed residue level of 4% or less. Indeed, the test results showed a range of 5.08 to 6.4% residue for the brushing and blowing operation of the Mikiaki reference.

#### D. SUMMARY.

Claim 12 includes the combination of three structural features which result from the claimed process steps of the present invention. The first feature is "a core substrate exposed section ... [with] 4% or less residual active material by weight in said volume of said core substrate exposed section." The second is "said core substrate exposed section, after said removing of said active material and said compressing, being substantially equal to a strength of said pressed portions." And

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finally, the third is "substantially true straight boundaries being formed between said pressed portions and said core substrate exposed section after said compressing exhibiting a deviation from straight of no more than 0.2 mm[.]" It is respectfully submitted that the prior art references considered alone do not enable production of a product have such a combination of features and that in combination, the prior art does not render obvious a process to achieve such a combination of features.

In the rejections the Examiner has averred that obtaining such features would be obvious merely because the prior art in one way or another indicates that low residues or straight boundaries are desirable. However, absent enablement, what may be desirable is not obvious unless enabled.

It is the process of the present invention which produces the claimed boundary straightness. This process has been found to be novel and nonobvious as demonstrated by the issuance of the method claims in the parent application. Even if one desired to produce a straight boundary as claimed, it is settle case law that mere desirability of a characteristic of a product cannot render a product obvious when the prior art does not teach nor render obvious a process to enable production of a product with the characteristic. *In re Irani*, 166 USPQ24, 27 (CCPA 1970). The processes disclosed by the Hideo and Mikiaki reference do not enable producing the claimed boundary straightness. Test results have also shown



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that the references do not produce the claimed low residues levels. Additionally, none of the references addresses the strength limitations present in claim 12. Hence, the references cannot render claim 12 unpatentable.

Thus, it is respectfully submitted that the rejected claims are not anticipated nor rendered obvious in view of the applied references for the reasons stated above. Reconsideration of the rejections of claims 12-19 and their allowance are respectfully requested.

**REQUEST FOR EXTENSION OF TIME**

Applicant respectfully request three month extension of time for responding to the Office Action. The fee of \$1050.00 for the extension is provided for in the charge authorization presented in the PTO Form 2038, Credit Card Payment form, provided herewith.

If there is any discrepancy between the fee(s) due and the fee payment authorized in the Credit Card Payment Form PTO-2038 or the Form PTO-2038 is missing or fee payment via the Form PTO-2038 cannot be processed, the USPTO is hereby authorized to charge any fee(s) or fee(s) deficiency or credit any excess payment to Deposit Account No. 10-1250.

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In light of the foregoing, the application is now believed to be in proper form for allowance of all claims and notice to that effect is earnestly solicited.

Respectfully submitted,  
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